

ABB Process Power Simulator

Reduce unplanned downtime through simulation

The consequences of human error can be costly and dangerous for oil, gas and chemical companies. ABB Process Power Simulator provides operators a replica of the electrical control system so they can safely master electrical generation and distribution without affecting production.

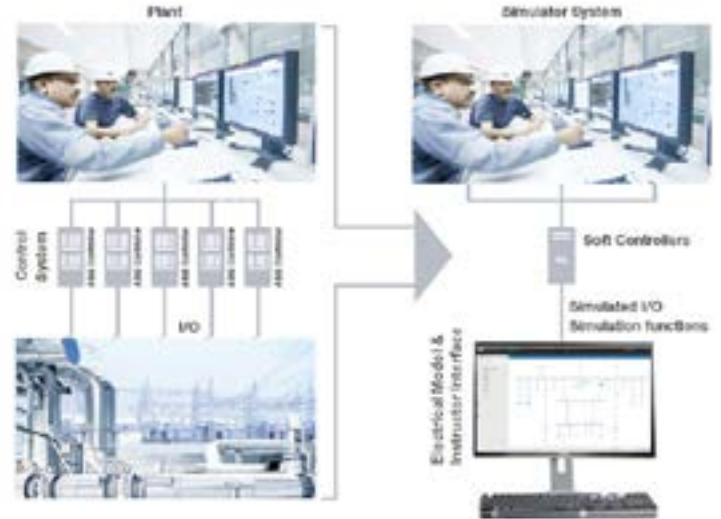


Figure 1: ABB Process Power Simulator creates a copy of a plant electrical control system in a disconnected environment for training, testing and verification of process modifications.

Overview

ABB Process Power Simulator allows electrical operator training and electrical control system testing to be conducted in a realistic, yet disconnected environment (Figure 1).

It uses a copy of the facility electrical control system to create the most accurate real-world environment to expose operators to situations and circumstances they may never experience during day-to-day operations, such as load shedding and power control.

ABB Process Power Simulator allows for verification and validation of control strategies, product solutions, procedures and sequences to be completed in a safe environment. It can be used for optimization, electrical application behavior and engineering studies to improve productivity and energy savings. Process Power Simulator can also help operators anticipate what the use of new functionality, new features and changes in the electrical topology could mean for plant processes and production.

Benefits

- Provides realistic and practical operator training
- Boosts operator confidence in handling the electrical distribution and power generation safely and efficiently
- Enhances operator performance and understanding through safe, offline training and skill development
- Reduces duration and costs of Power Management System Factory Acceptance Test and commissioning
- Lowers safety risks and number of process interruptions and blackouts
- Ensures compliance with regulatory testing
- Improves operations with lower electricity costs
- Reduces emissions and meets new legislative mandates
- Saves time and money by identifying potential problems during design phase
- Accelerates recovery of power and productivity after a failure

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Features

ABB Electrical Model Editor tool includes:

- Drag-and-drop model generation
- Standard-to-advanced configuration tuning
- Multiple object select and value change
- Background Single Line Diagram (SLD)
- Save and load model



ABB Electrical Model Editor

ABB Process Power Simulator

Instructor Interface includes:

- Instructor Commands: Start/Stop, Freeze/Resume, Load/Save IC
- Local/Remote control
- Equipment operation
- Equipment malfunction
- Equipment parameter tuning
- Single signal trip generation
- Online value status presentation



ABB Process Power Simulator Instructor Interface

Simulated components:

- Engine and Generator
 - Speed governor (GOV)
 - Automatic Voltage Regulator (AVR)
- Transformer with Online Tap Changer
- Bay circuit breaker
- Protection relay
- Grid
- Bus bar
- Synchronizer
- Loads and motors
 - Direct online induction motor
 - Motor starter
 - Variable speed drive
 - Generic load

Why choose ABB

- ABB is the only supplier who can engage as a fully integrated provider combining Main Automation Contractor and Main Electrical Contractor on the same control system
 - Real-time simulation of system dynamics with high level of fidelity
 - ABB 800xA electrical control system
 - Possible to integrate with process model for real plant experience
 - Direct integration with Process Power Manager library
- ABB is committed to providing customers with reliable, consistent support throughout the plant or project life cycle

Services and support

- Software agreement for updates and upgrades
- Service agreement for remote monitoring, maintenance and consulting
- Service Desk Support for technical questions
- Training on how to install and maintain software

Contact information

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